

## Control Valves

- Rugged construction.
- Wide range of sizes and pressure ratings.
- To be used in wide range of applications.
- Various materials options available.
- Low cavitation
- High swallowing capacity
- Double seals of metal and rubber materials
- Full range of flow capacity and pressure adjustment
- Low head loss
- Various operating gears and actuators
- Different corrosion resistant coatings are available.
- All internal components are made of stainless materials.
- Linear regulating characteristics.

## FEATURES

Cylindrical piston is the opening and closing part of this valve. When the valve is opening, the piston will not be affected by blind disc forces of the fluid. The torque is reduced significantly. It's only 1/3 to 1/5 of the regular gate valves' or butterfly valves' operating torque valves. Piston will do axial movement guided by bronze rails. This material combination of piston and rails is insensitive to deposits. The piston will be securely guided even in throttled positions. And further reduces the operating forces.



Cylindrical piston guided on bronze rails provides low friction.





### Vaned Ring

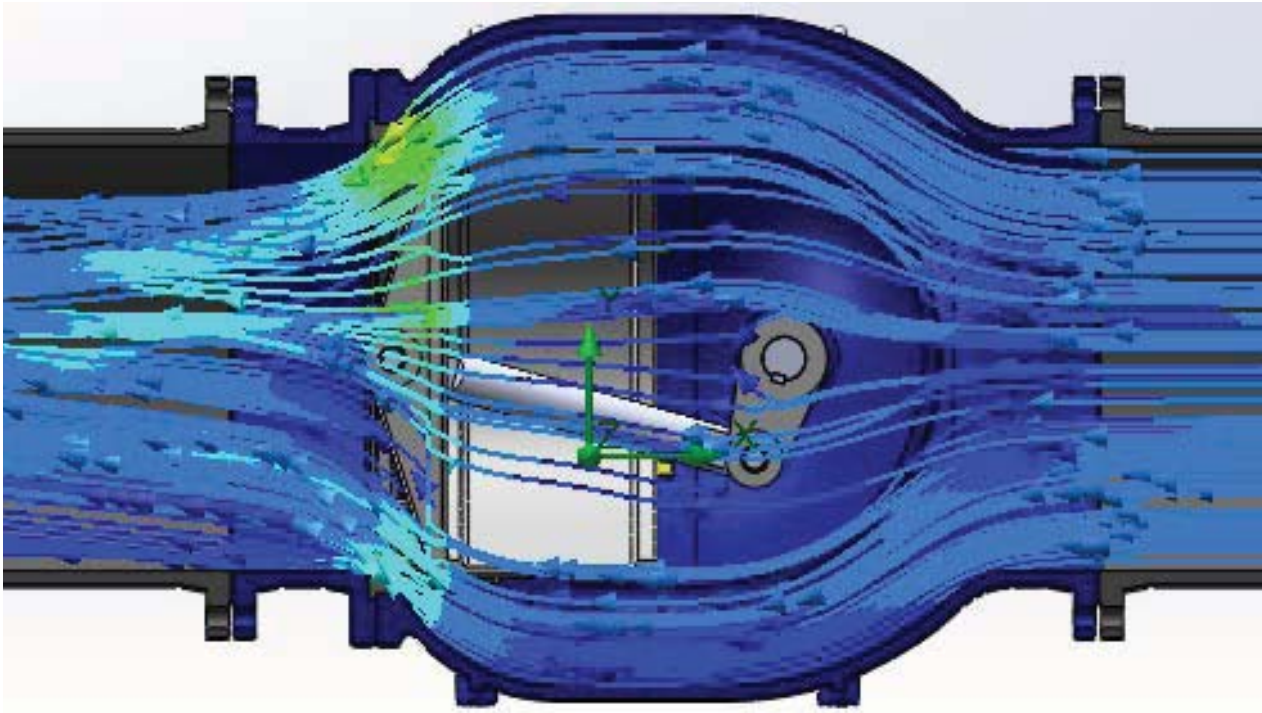
The vaned ring is a component which has equally distributed vanes. When fluid flow through, the upstream fluid will break into many individual streamlines giving a spiral movement to the flow. The streamlines are guided to the center of the pipeline which will avoid cavitation damage of the pipeline because the cavitation bubbles become unstable and collapse, they do not collapse on the surface of the wall but in the water. And whenever water is regulated or isolated, it flows through a reduced area, with its velocity increasing and its pressure dropping. Water will evaporate if the pressure falls to less than the vapour pressure of water.



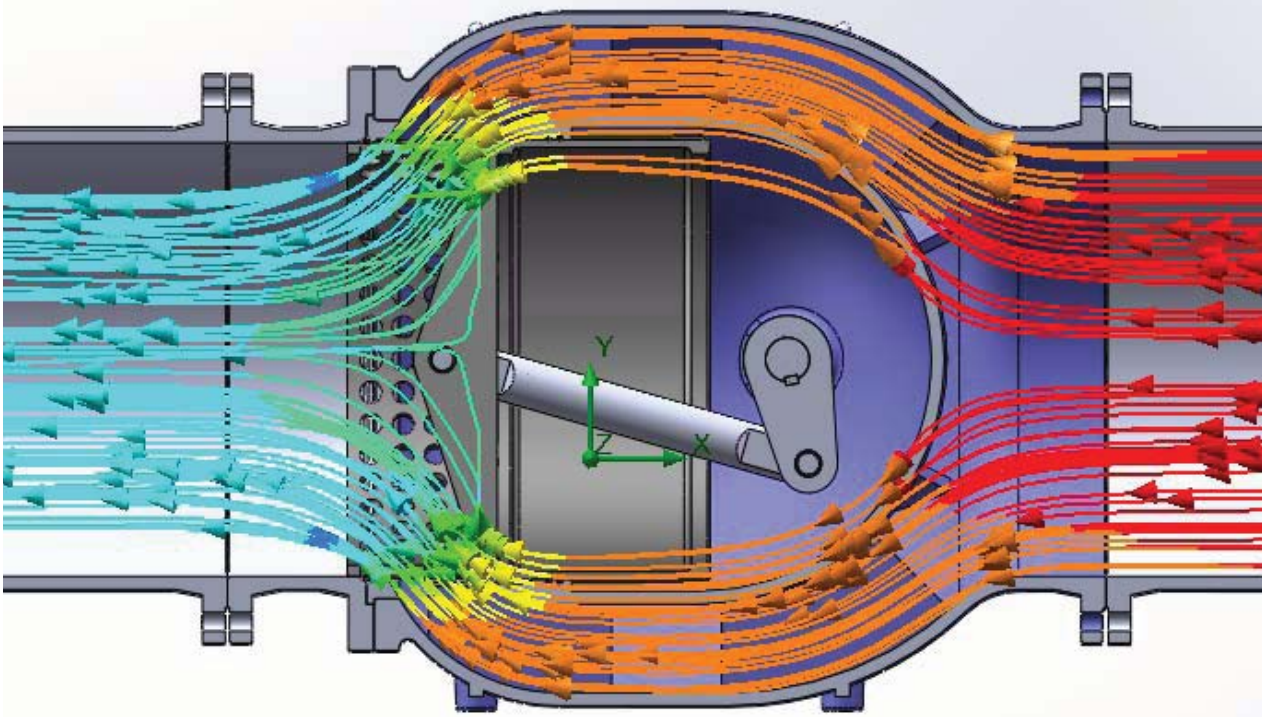
### Caged Cylinder

The caged cylinder is a slotted extension of the piston. The slots are designed according to the operating conditions. The water is throttled from outside through the cylinder that causes the high velocity jet from each individual slot to collide with other jets. This collision of the water jets is confined to the center of the cylinder where there is no material which could be destroyed. Velocity energy is thus converted to pressure energy which destroys at the flow axis the cavitation bubbles produced by the slots and entrained by the flow, without causing any damage.

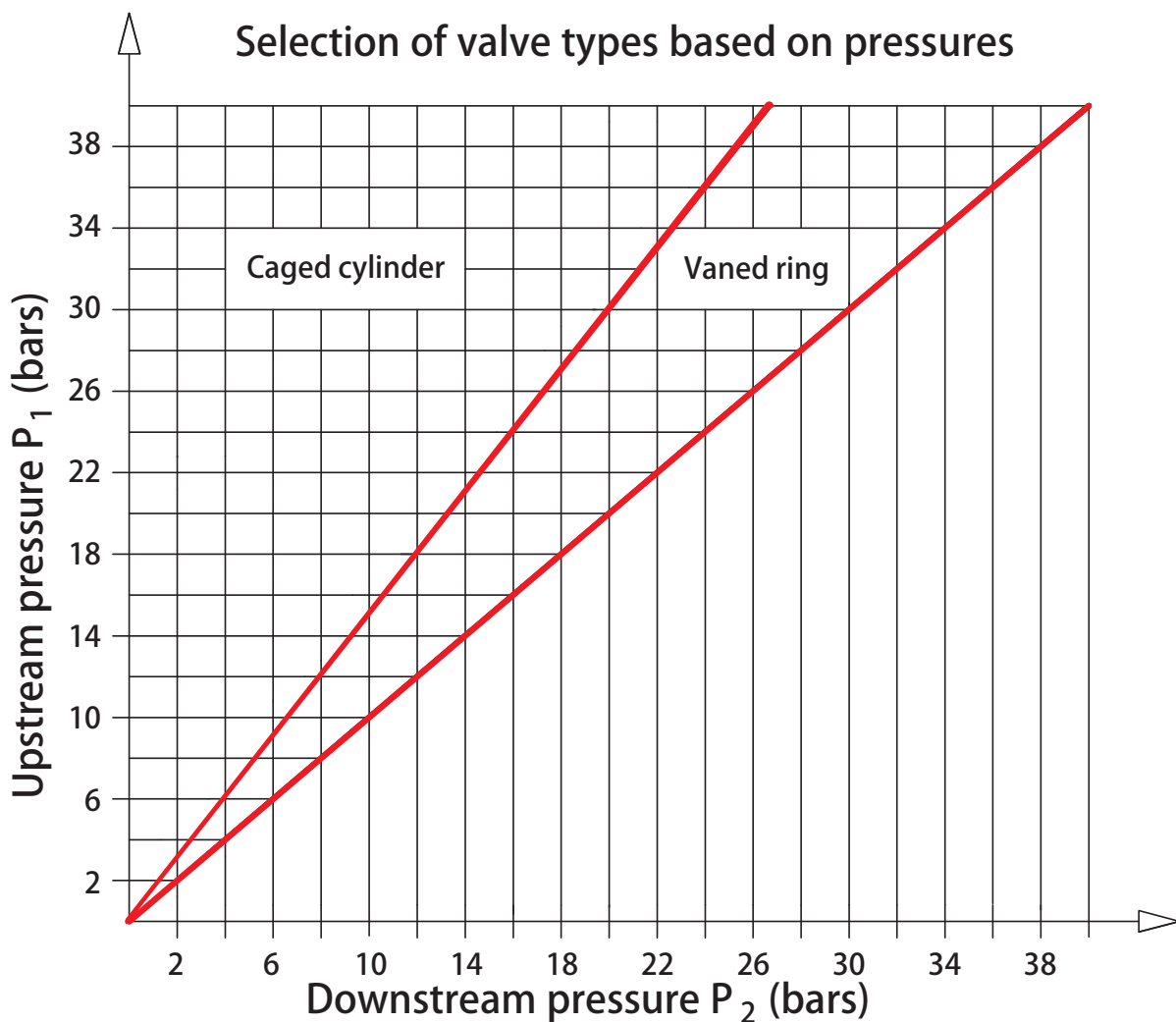




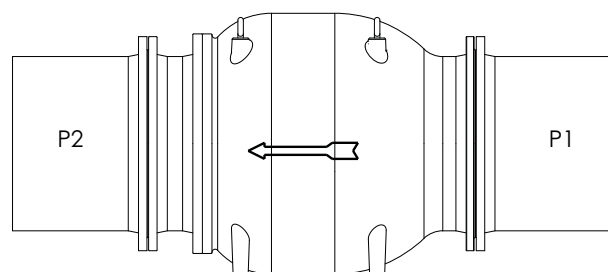
Flow of the Vaned Ring (Cavitation in the Pipe Center)



Flow of the Caged Cylinder (Cavitation in the Pipe Center)



Size and design of the Plunger Valve is not based on the pipeline diameter but on the pressure conditions and the minimum and maximum flow rates. To properly select the right size and design for your application, please contact us



# WIDE RANGE OF SIZES, PRESSURES, MATERIALS

We offer from DN100 (4inch) to DN2000 (80inch) Piston Type Flow Control valves in pressure rating PN10, PN16, PN25 and various materials to choose upon customers' requests or applications.



DN1600 Piston Type Flow Control Valve (Plunger Valve)



# SUITABLE FOR VARIOUS APPLICATIONS



1 Water Treatment Plant



2 Water Distribution System



3 Mining



4 Sewage Treatment Plant

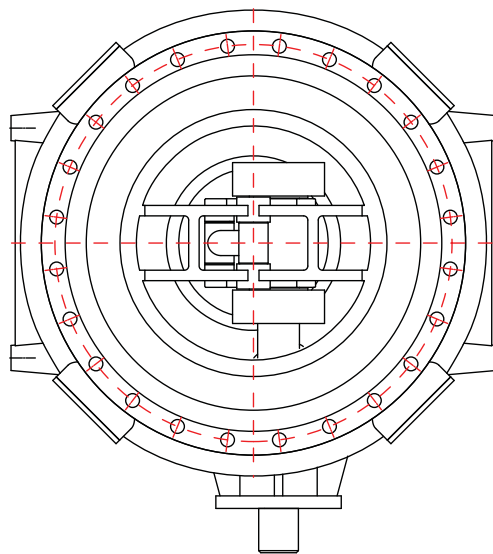
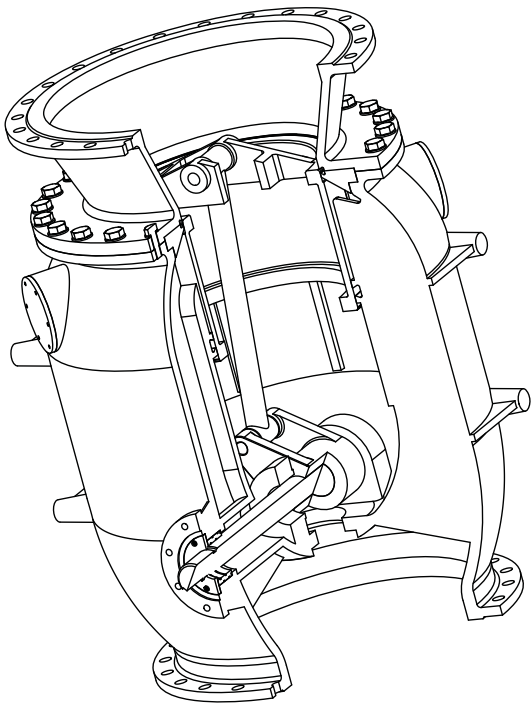
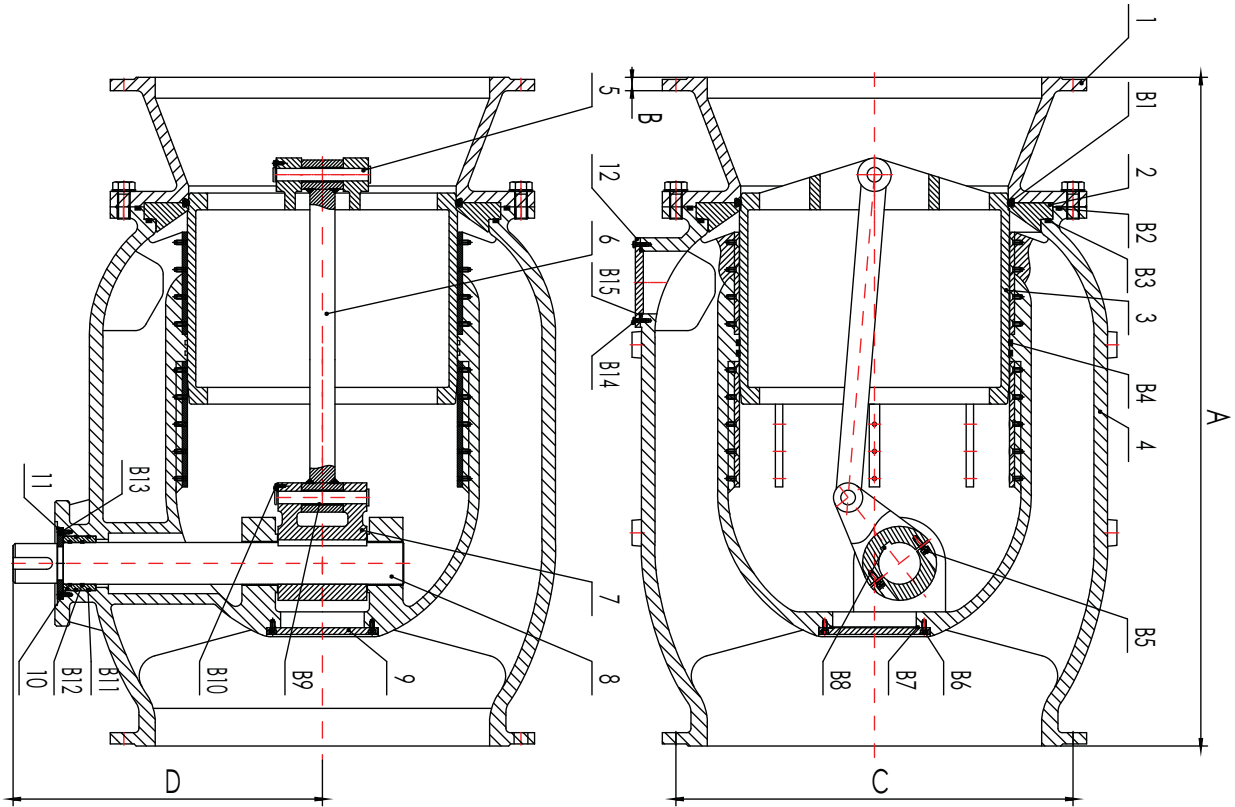


5 Petro-Chemical



6 Power Plant

# PRODUCT DRAWING





# DIMENSIONS

Main Dimensions (mm)						
Valve Sizes	A	B		C		D
		PN10	PN16	PN10	PN16	
DN100	325	22	22	180	180	140
DN125	325	22	22	210	210	160
DN150	350	24	24	240	240	195
DN200	400	24	24	295	295	220
DN250	500	26	26	350	355	220
DN300	600	26	28	400	410	280
DN350	700	26	30	460	470	340
DN400	800	26	32	515	525	440
DN450	900	28	40	565	585	500
DN500	1050	28	44	620	650	550
DN600	1175	34	54	725	770	645
DN700	1320	34	40	840	840	700
DN800	1480	36	42	950	950	805
DN900	1700	38	44	1050	1050	895
DN1000	1900	38	46	1160	1170	1030
DN1200	2100	44	52	1380	1390	1155
DN1400	2420	48	58	1590	1590	1390
DN1600	2700	52	64	1820	1820	1605
DN1800	3070	56	68	2020	2020	1760
DN2000	3250	60	70	2230	2230	1965

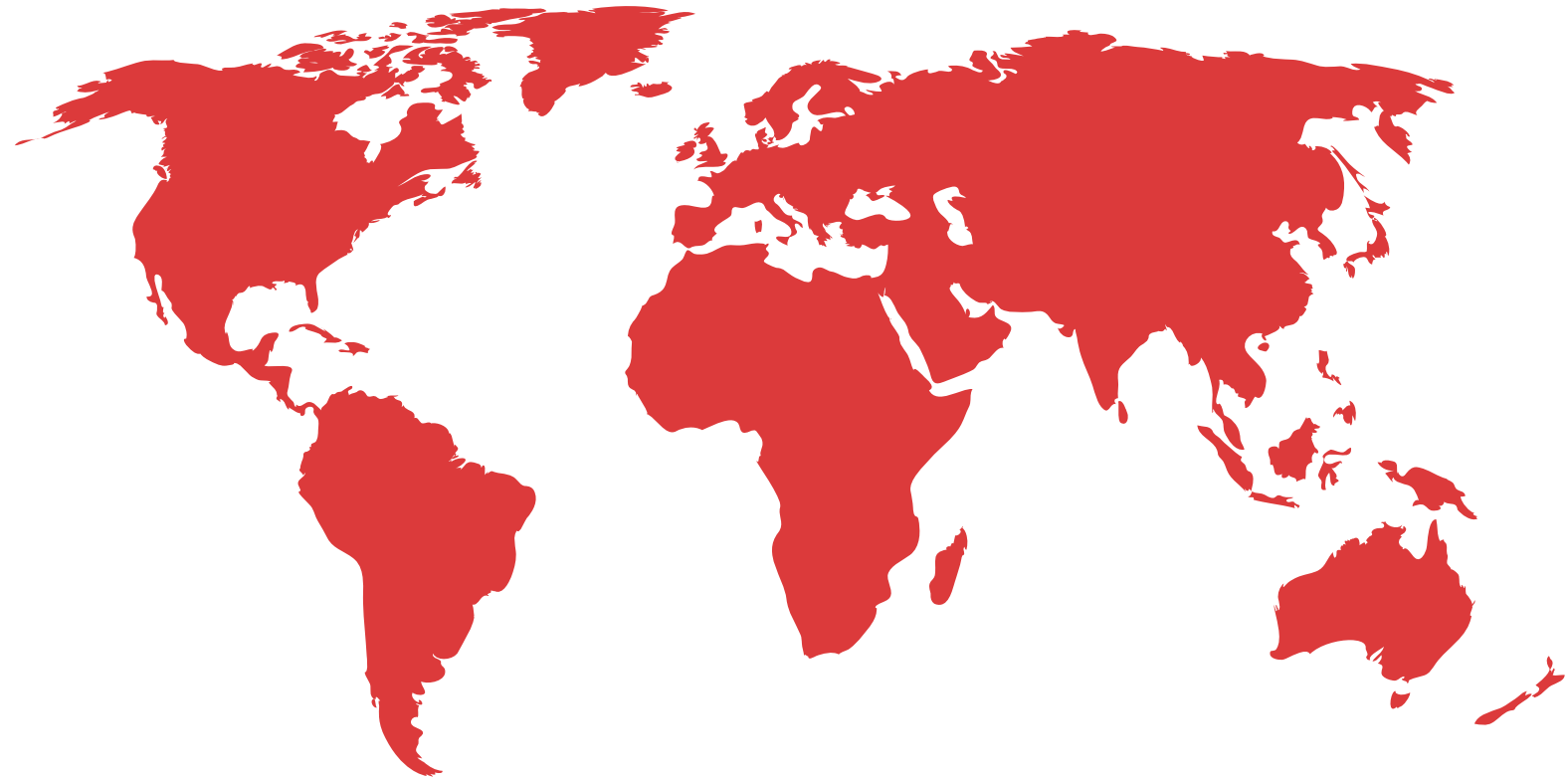
For other sizes, please contact factory for information.

# MATERIAL OF CONSTRUCTION

Bill of Material		
Item	Description	Material
1	Front Body	Ductile Iron
2	Seat	Stainless Steel
3	Piston	Stainless Steel
4	Back Body	Ductile Iron
5	Pin	Steel
6	Lever	Stainless Steel
7	Clip	Stainless Steel
8	Shaft	Stainless Steel
9	Bottom Cover	Ductile Iron
10	Bushing	Bronze
11	Gland	Ductile Iron
12	Side Cover	Ductile Iron
B1	O ring	NBR
B2	O ring	NBR
B3	O ring	NBR
B4	O ring	NBR
B5	Inner Hex Bolt	Stainless Steel
B6	Inner Hex Bolt	Stainless Steel
B7	O ring	NBR
B8	Key	Steel
B9	Bushing	PTFE
B10	Hex Bolt	Stainless Steel
B11	O ring	NBR
B12	O ring	NBR
B13	Inner Hex Bolt	Stainless Steel
B14	Hex Bolt	Stainless Steel
B15	O ring	NBR

Note: Other materials are available upon request.

[WWW.WATERPLUGVALVE.COM](http://WWW.WATERPLUGVALVE.COM)



CONSTANTLY IMPROVING...

---